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ABSTRACT

This study examined how college students' interracial/interethnic interactions affected development of leadership skills, knowledge of diverse people, and ability to get along with diverse people. Data came from the 1991 and 1992 Freshman Survey and the College Student Survey, administered by the Higher Education Research Institute. The sample included 8,877 first-time full-time students attending 115 predominantly white, four-year private institutions. Dependent variables were self-rated leadership abilities and self-rated changes in cultural knowledge and understanding. Independent variables were interracial interaction, racial exclusion (not socializing with others of a different race, feeling excluded because of race), and racial make-up of students' close friends. The paper finds that student interracial interactions contributed significantly to development of cultural awareness and also to leadership, with leadership ability apparently enhanced by socializing and studying with students of a different race or ethnicity. This is especially so for students who are least likely to have close interracial friendships. Feeling excluded due to race/ethnicity was more prevalent among students with fewer same-race friends and negatively affected students' growth in cultural knowledge and understanding. Eight data tables are included. Appended are tables listing the variables used in the regression models. (Contains 37 references.) (SM)

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DEVELOPING LEADERSHIP SKILLS FOR DIVERSITY

THE ROLE OF INTERRACIAL INTERACTION

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INTRODUCTION

Through the efforts of the Civil Rights Movement, the implementation of programs such as affirmative action, and the rapidly changing makeup of the overall U.S. population, today's college campuses are not the overwhelmingly white environments that they were in 1950s and 1960s. For example, by 1988 white student enrollments had steadily declined to less than 80 percent of all undergraduates nationally (Chronicle of Higher Education, 1992). However, predominantly white campuses are not simply becoming black and white. Asian American and Latino populations have grown particularly fast and contemporary college campuses are quickly evolving into racially and ethnically diverse environments (Justiz, 1994; Levine and Associates, 1989).

Ethnic and racial campus diversity, however, is not without controversy. Increasing diversity on campus in the 1980s seemed to have come at the expense of renewed racial tension and hostilities (Altbach and Lomotey, 1991; Dalton, 1991; Farrell and Jones, 1988; Hively, 1990; Sowell, 1989a). Furthermore, diversity was blamed for another "problem," campus balkanization. Balkanization, or the self-segregation of students on campus by race and ethnicity, was an image of the Berkeley campus described by Troy Duster (1991) in his study of diversity at the University of California. This description shattered idyllic images of racial diversity in college and was picked up by the national media as one of the foremost criticisms of diversity (Duster, 1991).

The diversity controversy continues today with the sides clearly drawn. On the one hand, many higher education leaders support campus diversity for its educational efficacy. For example, former UCLA Chancellor Charles F. Young, in defense of race-based affirmative action and a diverse student body, has stated that "a diverse learning

environment is vital to a quality education and to producing students capable of leading in a diverse society" (Daily Bruin, 1995). Similarly, Neil Rudenstine, Harvard University president, contends that a primary outcome fostered by a diverse college environment is the development of "forms of tolerance and mutual respect on which the health of our civic life depends" (Rudenstine, 1996, B1). These claims are contested by detractors of diversity, who claim that ethnic and racial diversity in our colleges is the result of misguided affirmative action policies and has led not only to balkanized campuses, but to the development of ethnocentrism and the reinforcement of racial stereotypes in students (D'Souza, 1991; Sowell, 1989b).

The difficulty with assessing these claims on the developmental aspect of campus racial diversity is that there exists only a handful of empirical studies that focus on student development and racial diversity, especially with respect to the development of such outcomes as ethnocentrism and leadership ability. In this study I focus one of the most important aspects of the college experience - student interaction – in pursuing a greater understanding of how campus diversity affects students. The primary question posed in this study is, what role does the degree of a student's interracial and interethnic interaction play in the development of leadership skills, knowledge of people from different cultures, and the ability to get along with people of a different race or ethnicity?

CONTACT THEORY AND STUDENT INTERRACIAL INTERACTION

For over forty years, Gordon W. Allport's (1954) Contact Theory for reducing prejudice has been used in many sectors of education to inform educational policy with respect to issues concerning racial diversity. Allport's theory contends that cross-cultural contact may or may not lead to understanding and reduced prejudice across racial lines;

certain conditions must characterize the context of the contact for prejudice reduction. According to Allport, prejudice reduction and understanding as a result of cross-cultural interaction are enhanced when the individuals involved are of equal status, when the encounter requires cooperation and the pursuit of a common goal, and when the contact is supported by those in positions of authority (Allport, 1954). The college campus setting appears to be one in which the satisfaction of each of those conditions is possible.

Implicit in the arguments on both sides of the diversity debate is the ultimate success or failure to fulfill the conditions for positive interracial or interethnic contact. Critics of diversity (e.g., D'Souza, 1991; Sowell, 1989b) have pointed out that the disparate academic abilities among students on a racially diverse campus are patterned by race and in that way, students of different racial and ethnic groups meet and interact under conditions of unequal status. Other researchers contend that racial minority students experience feelings of isolation and cultural alienation on predominantly white campuses (Allen, 1985, 1992; Loo and Rolison, 1986; Smedley, Meyers, and Harrell, 1993), which can preclude possibilities for equal-status interracial interaction. On the other hand, one may argue that on the campus of a higher education institution, outside of the structure of the classroom or lecture hall, students who interact across race do so voluntarily. In that context, the contact arguably occurs under the conditions of equal status. As noted in the introduction, however, racial and ethnic diversification of college student bodies has coincided with increasingly tense racial climates and increasing reports of racial incidents. Could it be that conditions of cooperation or the sanctions of an authority are not being met?

Duster (1991) offered three experiences of diversity which provide insight into the complexities and contradictions of the nature of interracial and interethnic contact on

campus. If diversity is experienced as an option, members of the majority group choose whether or not to interact across race and minority group members are expected to assimilate to the majority culture. As campuses diversify and a dominant majority group becomes less evident, a number of ethnic and racial groups may contribute to campus culture and absorb campus time, space, and resources. In this second experience of diversity, any number of now-distinct ethnic groups attempt to affirm their cultures and identities on campus. Conflict and campus tension may result as groups clash over the content of the curriculum, spaces in student government, money and resources for student organizations, and additional slots in the admissions pool. Clearly, these two experiences of diversity describe conditions of either unequal status between majority and minority group members or an environment of competition rather than cooperation between groups. Duster notes a third experience of diversity that essentially satisfies Allport's conditions for positive interracial contact. In the third experience of diversity, cultural difference is bridged and experienced, people and their differences are seen as educational resources, and "a special value is placed upon a contribution to the whole, or to the common collective experience" (Duster, 1991, p. 54).

It is likely that interracial contact on a college campus for any given student may encompass any or all three of the experiences of diversity described by Duster. However, college student development and socialization theories (Astin, 1984; Pascarella, 1985; Tinto, 1975; Weidman, 1989) as well as an enormous body of empirical data (Astin, 1977, 1993a; Feldman and Newcomb, 1969; Pascarella and Terenzini, 1991) suggest that at a minimum, frequent interaction with other students in college leads to the development of a whole host of positive outcomes including social self-confidence, leadership skills, and

many other interpersonal and cognitive outcomes. In other words, while we may not know exactly how students are experiencing diversity on campus, we do know that student-student contact on some level is beneficial to development.

Previous Research on Interracial Interaction

Although perspectives on development on a multicultural campus may be at odds, there are a few studies that directly address interracial student interaction and outcomes in college. Perhaps in response to criticism and debates over self-segregation and ethnic/racial balkanization on campus, a small number of recent studies have addressed associations between the college experience and interaction across race and ethnicity. In the first of these, Astin (1993a, 1993b) used a longitudinal database consisting of a national sample of students to study the correlates to socializing with someone of a different race in college. Astin found that independent of students' entering characteristics and different types of college environments, frequent interracial interaction in college was associated with increases in cultural awareness, commitment to racial understanding, commitment to cleaning up the environment, and higher levels of academic development (critical thinking skills, analytical skills, general and specific knowledge, and writing skills) and satisfaction with college.

A similar study by Hurtado, Dey, and Treviño (1994) focused specifically on the issue of self-segregation on campus. They conducted a study of the pre-college and college factors associated with interracial interaction using a two-timepoint, longitudinal dataset of American college students collected between 1987 and 1991. On a descriptive level, Hurtado and her colleagues found that students of color (who are minorities on most campuses) were more likely than white students to interact across race. Furthermore,

controlling for student background and institutional characteristics, cross-racial interaction was predicted by student involvement in various activities, but the nature of those activities varied across race. For example, more frequent interracial interaction was related to involvement in academic activities for whites and Chicanos, social activities for whites and African Americans, intercollegiate sports for whites and Asian Americans, residence hall advising and participation in Greek organizations for Chicanos, and participation in racial or ethnic student organizations for whites. In essence, their study showed how student involvement in college -- a widely recognized correlate to retention, satisfaction, and cognitive and affective development (Astin, 1993a, 1984) -- goes hand-in-hand with interracial interaction among students.

In a recent study, Chang (1996) examined the relationship between the degree of racial diversity in the study body and frequency of socialization across race. Using a multi-institutional, longitudinal database of college students, Chang found that greater racial diversity in the undergraduate population increases the likelihood of frequent interactions across race. In addition, he found that interracial interaction was associated with many other interactions with students, including discussing racial issues in college, taking ethnic studies courses, and attending racial/cultural awareness workshops. Furthermore, Chang also showed that these associated behaviors and attitudes directly enhance student retention, college satisfaction, intellectual self-concept, and social self-concept. In other words, Chang's study identified a link between interracial interaction and several important educational outcomes.

One limitation of each of these longitudinal studies is that the context of the interactions across race or the type of relationship involved in the interaction is rarely

specified. Allport (1954) distinguished the effects of at least two different types of interracial contact. Negative results such as the reinforcement of racial stereotypes are likely to occur if the contact is casual. These contacts may be less frequent and less meaningful for the participants. Acquaintance contacts, on the other hand, may be more frequent and characterized by a stronger sense of a relationship established between people. These contacts are more likely to be beneficial in reducing prejudice and increasing cross-cultural understanding. In the Chang and Astin studies, interracial interaction was measured simply as the frequency in which a student "socialized with someone of a different race/ethnicity" while in college. Clearly, we cannot determine whether the interracial interaction was "casual" or of an "acquaintance" nature. Furthermore, we do not know whether the benefits of socializing across race in college are limited to acquaintance contacts or are reaped through casual contacts as well. The Hurtado et. al. study utilized an improved measure. Interracial interaction was operationalized as the frequency in which a student had studied, dined, or roomed with someone of a different race/ethnicity. Depending on the specific persons with whom a student engages in these activities (close friends, new acquaintances, assigned roommates, etc.), it is easy to interpret these interactions as either casual or acquaintance contacts. Again, our interpretive lenses remain cloudy with respect to findings on interracial interaction.

In the present study, I attempt to clarify our understanding of the benefits of interracial interaction to students by taking into account an additional factor – the racial diversity of students' close friends. In this way, we can infer differences in the effects of interracial contact between those that are of an acquaintance nature and those that are more casual. For example, if a student's close friends are all of a different race from herself,

then it is highly likely that that student has frequent and positive interracial interactions, regardless of whether those contacts are through dining, studying, or rooming together (Antonio, 1998). Interracial interactions among students who normally only associate with people of his own race – a white student whose close friends are all white, for example – may be affected quite differently as a result of those experiences because they are leaving the familiar interpersonal environment of their best friends to interact. In the following, I distinguish between students with more and less racially homogeneous friendships and examine the effects of interracial interaction on the development of cultural knowledge and understanding and on a frequently assumed but yet unexamined correlate to interracial interaction, leadership ability.

Data and Methodology

The data utilized in this study are drawn from the 1991 and 1992 Freshman Surveys and the 1996 College Student Survey (CSS), which are administered by the Higher Education Research Institute as part of the Cooperative Institutional Research Program, a project sponsored by the American Council on Education. The combination of these surveys provides a longitudinal database for a national cohort of 1991 and 1992 college freshmen who were surveyed upon entrance to college and surveyed again in 1996. The particular sample analyzed for this study include 8,877 first-time, full-time students attending 115 four-year, predominantly white institutions across the country. The small number students attending two-year institutions were excluded from the analysis. The sample is not nationally-representative, but primarily represents students attending private four-year colleges (70%) and private universities (15%).

The primary variables of interest include two dependent measures, two measures of student involvement (independent variables), and a measure of the racial composition of a student's close friends, each derived from the CSS follow-up survey. The dependent variables are composites derived from an exploratory, principal components factor analysis of CSS items measuring self-rated abilities (5 point scale from "lowest 10%" to "highest 10%") and self-rated changes in college (5 point scale from "much weaker" to "much stronger"):

• Leadership Ability (self-ratings) (α = 0.73)	factor loading
leadership ability self-rating	0.74
social self-confidence self-rating	0.71
public speaking ability self-rating	0.71

• Cultural Knowledge/Understanding (self-rated changes) (α = 0.70)	factor loading
knowledge of people from different races/cultures	0.64
ability to get along with people of a different race/culture	0.61

The self-ratings that make up the composite outcome, Leadership Ability, were each identically pretested in with the 1991 and 1992 Freshman Surveys. The two items that measure growth in Cultural Knowledge/Understanding were not pretested. Previous research, however, has shown validity with measures of self-rated growth in assessing the impact of college on students (Anaya, 1992; Astin, 1993a).

The key independent variables include two similarly derived measures from the CSS. These measures reflect the reported frequency of a number of items related to racial diversity on campus (3 point scale from "not at all" to "frequently"):

• Interracial Interaction (α = 0.74)	factor loading
dined with someone of a different racial/ethnic group	0.84
studied with someone of a different racial/ethnic group	0.81
had a roommate of a different racial/ethnic group	0.68
dated someone of a different racial/ethnic group	0.61

• Racial Exclusion (α = 0.57)	factor loading
felt pressure not to socialize with others of a different race	0.79
felt excluded from school activities because of my race	0.74

The third primary independent variable of interest is a measure of the racial diversity of a student's "close friends." This variable measures whether "none," "a few," "most," or "all," of a student's close friends are of the same race or ethnicity as the respondent. Together these variables allow the investigation of interracial interaction while controlling for the relative "diversity" or "homogeneity" of students' interpersonal environment and further, taking into account an affective sense of the interpersonal racial climate.

Descriptive and regression analyses were conducted on two subsamples of the data, students who reported "all" or "most" of their close friends were of their same race or ethnicity (n=7236) and students who reported "a few" or "none" of their close friends were of their same race or ethnicity (n=1641). Crosstabulations comparing these two groups were conducted with respect to frequency of interracial interactions (dining, studying, dating, or rooming with someone of a different race or ethnicity) and the two measures of racial exclusion.

Separate OLS regressions were conducted for each group to determine the role of interracial interaction on the development of Leadership Ability and Cultural

Knowledge/Understanding. Independent variables were entered in three discrete blocks for all equations, in accordance with the college impact and socialization models of Astin (1984) and Weidman (1989). Weidman conceptualizes the major influences on student change in college to be pre-college or student background characteristics, the academic and social normative context of an institution, and the impact of parental and non-college reference groups. Astin's conception is similar but emphasizes the central importance of student involvement (behaviors) in assessing how students change in college.

Since students are not randomly assigned to different college environments and student characteristics tend to be correlated with specific outcomes, both authors stress the need to take into account students' backgrounds before examining impacts of the college environment. The Leadership Ability pretest, demographic characteristics, and pre-college variables were all taken from the Freshman Surveys and were controlled in the first equation. These and all additional independent variables were chosen based on previous research on interracial interaction (Astin, 1993a, 1993b; Chang, 1996; Hurtado, Carter, and Sharp, 1995; Hurtado, Dey, and Treviño, 1994), all of which utilize the conceptual college impact models of either Astin (1984) or Weidman (1989). Pre-college variables include: gender, age, race (white/student of color), socioeconomic status (SES), high school grades, academic self-concept, hours per week socializing with students in high school, liberal political orientation, understanding of others (self-rating), and commitment to racial understanding. The pre-college variables also included two composite measures of value orientations, Social Activism and Materialism and Status orientation. These measures were derived from an exploratory factor analysis of student values, the details of which can

be found in the Appendix. Scoring for all of the variables in the model are also shown in the Appendix.

Since students in different types of institutions vary in terms of their perceptions of the campus racial climate {students in universities perceive less communication among students of different ethnic groups compared to those in four-year colleges (Hurtado, 1992)}, institutional characteristics are added to the equation in the second model. Institutions are distinguished as being public universities, private universities, and private four-year colleges (public four-year colleges are the reference group), and for further stratification, institutional selectivity is also measured. Finally, in accordance with college impact and socialization models, a block of variables containing a number of relevant student involvement activities were controlled. These measures were taken from the follow-up survey (CSS) and included: the measure of Racial Exclusion; three measures of involvement with other students (frequency of working on group projects, studying with other students, and the number of hours per week spent socializing with friends); and dichotomous measures of participation in student government, campus demonstrations and protests, ethnic student organizations, fraternities or sororities, and racial/cultural awareness workshops while in college. Interracial Interaction was entered into regression equations last to examine its association with the dependent variable after all other independent variables are controlled. Table A1 in the appendix provides a complete listing of variables used in the regression analyses.

Descriptive Results

Analysis of the frequency of interracial interactions clearly illustrate potential differences in the nature of students' interracial contacts in college (see Table 1). While

dining and studying are the two most common types of interracial activities among all students, students with higher degrees of diversity among their close friends dine, study, date, and room with students of a different racial or ethnic group at two to five times the rate of their peers. While this is not a terribly surprising or unexpected result, it is clear that interracial friendships characterize the majority of frequent interracial contact among students.

Insert Table 1 about here

It should be noted, however, that although frequent interracial interaction appears to coincide with diverse friendships, the vast majority of students in this sample (~80%) report having fairly homogeneous friendships with respect to race and ethnicity. It remains to be seen whether the less frequent and presumably more casual interracial contact experienced by these students has the same impact on educational outcomes as for those students with diverse friendships.

The counter-argument to interracial interaction on a diverse campus is the presence of an environment where students feel pressure not to socialize with someone of a different race or ethnicity or feel excluded on campus because of their racial and ethnic backgrounds. Table 2 indicates that a relatively small proportion of students report feeling such pressures. Differences on these items between students with more or less racially diverse close friends, however, are evident and statistically significant. Almost one in four students who have no or just a few close friends of their same race felt excluded from school activities because of their racial/ethnic background. In contrast, just one in ten

students with same-race friends reported similarly. A similar pattern is evident with respect to feeling pressure not to socialize with students from other racial/ethnic groups. Interestingly, these results suggest that those students who have made the greatest efforts to engage cultural difference and develop relationships with people different from themselves are the same students who suffer most often from exclusionary experiences based on race. These results may indicate that students are in a "learning period" when it comes to establishing interracial friendships on campuses that are (1) still predominantly white and (2) dominated by a cultural norm defined by racially homogeneous friendships.

Insert Table 2 about here

Despite higher instances of negative feelings of racial exclusion among the aforementioned students, these students also report greater gains in cultural knowledge and understanding in college. The two items measuring growth in knowledge of other cultures and in the ability to get along with people of different races and cultures are shown in Table 3. Though the differences between groups do not appear to be as great as compared to the items in the previous two tables, they are statistically significant.

Insert Table 3 about here

In previous studies of interracial interaction, researchers have generally found that students of color socialize across race more often than white students on predominantly white campuses (Hurtado, Carter, and Sharp, 1995; Hurtado, Dey, and Treviño, 1994).

While it is not the focus of this study, popular conceptions of students clustering or "self-segregating" by race can also be investigated through the current focus on the racial diversity of close friends. The next table (Table 4) provides data on the issue of self-segregation among white students and students of color at the level of friendship.

Insert Table 4 about here

Only about 16% of all students report that all of their close friends are of the same race/ethnicity as themselves. Among students of color this proportion is even smaller – about one in twenty. The majority of students of color (56%) report that only "a few" or "none" of their close friends share their same race or ethnicity. In contrast, over 85% of white students report having all or mostly white close friends. These patterns suggest that the higher incidence of feeling racially excluded in mixed-race friendship groups may be due to the predominance of students of color who report having diverse friendships. Furthermore, they highlight the importance of controlling for race when estimating the impact of interracial interaction in college.

THE IMPACT OF INTERRACIAL INTERACTION IN COLLEGE

Leadership Ability

The first set of regression analyses examines the role of interracial interaction in the development of Leadership Ability in college. Tables 5 and 6 contain the standardized regression coefficients (betas) for three regression models. Model 1 includes the freshman survey pretest and pre-college variables in the equation, Model 2 adds (structural)

institutional variables to the equation, and Model 3 incorporates the measures of college involvement.

Insert Tables 5 and 6 about here

For both groups of students, pre-college characteristics (primarily the entering level of Leadership Ability) appear to be the prime determinants of Leadership Ability four or five years after college entry (Model 1). Regardless of the racial diversity of close friends, men and those who already have a record of frequent socializing with other students are more likely to increase their Leadership Ability scores in college. Unlike students with mostly same-race friends, students with only a few friends of their own race and who come to college with a strong commitment to racial understanding are also more likely to develop higher levels of Leadership Ability. For students with more homogeneous friendships, on the other hand, Leadership Ability is enhanced in college among students of color and those who enter college with higher levels of materialism, socioeconomic status, conservative political leanings, and self-rated understanding of others. Higher academic ability (indicated by grades and self-concept) among these students, however, appears to be associated with decreases in Leadership Ability.

Structural characteristics of institutions appear to be important correlates to Leadership Ability only for students whose close friends are of their same race (see Model 2). Relative to public four-year colleges, private institutions and public universities have a negative effect on Leadership Ability. This finding is consistent with earlier research which did not control for diversity of friendships (Astin, 1993a). For the analysis of

students with few same-race friends, the same relationships were not statistically significant, but institutional selectivity exhibited a negative effect after controlling for college involvement variables in Model 3.

The third column in Tables 5 and 6 contain the coefficients for Model 3, which includes the additional block of college involvement measures. Many involvement activities contribute to Leadership Ability, especially in the case of students with primarily same-race friends. With the exception of participating in an ethnic student organization, higher levels of Leadership Ability for these students are associated with every measure of student involvement: socializing with friends, working on group projects, studying with others, and participating in student government, protests, Greek organizations, and cultural awareness workshops. Students having few friends of their same race also exhibit positive associations with student-student interaction, but effects were evident for only four of the measured activities.

The primary focus of this study is on the effects of the remaining independent variable, Interracial Interaction. Interracial Interaction has significant and positive partial correlations with Leadership Ability after pre-college characteristics and institutional variables are controlled for both students with few same-race friends (partial correlation = .05, $p<.05$) and students with mostly same-race friends (partial correlation = .05, $p<.001$). In other words, the potential effect of interracial interaction is positive for all students. After controlling for all involvement variables, Interracial Interaction has a significant and positive relationship with Leadership Ability in Table 6 only. In other words, Leadership Ability appears to be enhanced by socializing and studying with students of a different race or ethnicity, but especially so for those students who are the least likely to have close,

interracial friendships. The lack of evidence for a similar relationship in Table 5 suggests that interracial contact with other students may be most beneficial when students interact more casually and outside of their friendship groups, at least with respect to the development of leadership skills.

Cultural Knowledge/Understanding

The regression models were less successful in predicting gains in Cultural Knowledge/Understanding in college (see Tables 7 and 8). Approximately 10% of the variance in the dependent variable was explained by the independent variables in the models for both groups of students. Interesting differences between the two analyses are evident, however. First, the results for Model 1 show only three common relationships between pre-college variables and the outcome measure. For both groups, higher socioeconomic backgrounds are associated with lower gains in cultural knowledge, while students who see themselves as understanding of others and as having a social activist orientation tend to report higher gains. Two additional pre-college characteristics appear to contribute to lower gains in cultural knowledge for students with primarily same-race friends. For these students, higher gains are associated with having a lower academic self-concept as a freshman and a more conservative political identification. Age only appears to be a factor for students with more diverse friendships, in that being older is associated with higher gains in cultural knowledge and understanding.

Perhaps the most interesting of the pre-college variables in this analysis is race itself. Relative to white students, students of color are more likely to experience increases in their level of cultural knowledge in college. This relationship is statistically significant only in Table 8, however. After controlling for institutional and involvement measures, the

relationship becomes nonsignificant in Table 8 and in Table 7, being a student of color becomes negatively associated with gains in cultural knowledge and understanding. The meaning of these relationships will be explored more fully below in the discussion of the impact of involvement variables.

Insert Tables 7 and 8 about here

While institutional variables (Model 2) appear to have no effect on gains in Cultural Knowledge/Understanding for students with few same-race friends, public universities exhibit a negative effect on the outcome for their counterparts with more homogenous friendships. More selective institutions are also associated with lower gains in Cultural Knowledge/Understanding for this group of students, but only in Model 3 after involvement variables are controlled. These results may be explained by research that found more hostile racial climates at universities and more selective institutions (Hurtado, 1992) on the one hand, and positive effects of selectivity on interracial interaction (Hurtado, Dey, and Treviño, 1994) on the other. According to those studies, the higher levels of student body diversity present in universities and more selective institutions contribute negatively to the racial climate but also allow more interaction across race. In other words, more hostile racial climates by themselves may inhibit the development of skills related to interacting with people of different cultures, but interracial interaction within those same institutions likely reduces those negative effects. The results presented here suggest that such interpretations may be more applicable to students with close friends of primarily the same race.

In terms of student activities in college, involvement in student protests and demonstrations, ethnic student organizations, and racial/cultural awareness workshops are associated with gains in Cultural Knowledge/Understanding for students in both Tables 7 and 8. For students with primarily same-race friends, working with students on group projects is also positively associated with gains in cultural knowledge, while being a fraternity or sorority member has a negative effect. Similar associations are not evident for in Table 7. Participation in student government, however, is associated with gains in Cultural Knowledge/Understanding for students with few same-race friends.

The importance of socializing across race for the development of cultural knowledge and understanding is evident for all students, regardless of the racial diversity of their close friends. In both analyses, Interracial Interaction has the strongest association with gains in Cultural Knowledge/Understanding among all measures of pre-college characteristics, institutional characteristics, and student involvements. The standardized coefficients indicate that frequent interracial interaction among students may be more important in developing cultural knowledge than even the activity in which gains are expected and have been documented, attending a cultural awareness workshop (Astin, 1993b; Pascarella, Edison, Nora, Hagedorn, and Terenzini, 1996; Springer, Palmer, Terenzini, Pascarella, and Nora, 1995).

Interestingly, the measure of Racial Exclusion is negatively related to gains in cultural knowledge and understanding, but only for students who report having none or few same-race friends. One plausible interpretation of this finding relates to the nature of the experience of having fewer close friends of the same race or ethnicity. Students who have few or perhaps no close friends of their same race probably benefit from an interpersonal

environment of cultural difference manifested in their friends. This simple conclusion could be drawn from the descriptive results showing higher scores on Cultural Knowledge/Understanding for these students. At the same time, however, it was found that these same students are also more likely to experience feelings of exclusion due to their race or ethnicity. The negative effects of racial exclusion apparent in this analysis may arise only for students with few same-race friends because such students do not have the interpersonal space of cultural safety provided by a circle of same-race close friends.

Also evident in Model 3 is the change in the coefficients for student of color status. In Table 7, the change from a nonsignificant effect to a negative one indicates that while students of color with few close friends of their own race generally report similar gains in cultural knowledge as do white students, they would actually report lower gains if not for their engagement in activities that are positively associated with cultural knowledge and understanding (i.e., attending cultural awareness workshops, participating in ethnic student organizations, engaging in interracial interaction). On the other hand, we might expect students of color with primarily same-race friends to report lower gains in cultural knowledge because of some "insulating" aspect of their more culturally homogeneous interpersonal environments. Instead, the nonsignificant coefficient in Model 3 of Table 8 suggests that students of color with same-race friends experience gains in cultural knowledge because again, compared to white students, they are more likely to engage in activities that enhance cultural knowledge and understanding.

LIMITATIONS

There are two primary limitations of this study that should be kept in mind. First, the longitudinal dataset used in the study, while being a national sample, is not representative

of all institution types. Although the scope of the development issues investigated in this paper pertain to the chosen population of institutions in the sample (predominantly white, four-year colleges and universities), within that given population the sample primarily represents students attending private four-year colleges and private universities. While it is not possible to fully assess the extent to which the findings in this study do not apply to socialization in public universities and colleges, two factors with respect to generalizability are relevant. First, statistical controls were used in the multivariate analyses to attempt to adjust for possible bias due to institution type and entering student characteristics. In addition, previous research has found no relationship between the central variable of this study, interracial interaction, and institution type (Hurtado, Carter, and Sharp, 1995; Hurtado, Dey, and Treviño, 1994).

Secondly, while this study improves upon previous work on interracial interaction by taking into account the racial diversity of a student's close friends, the research remains unable to determine exactly with whom students are socializing across race (e.g., best friends, classmates, a teaching assistant) and the exact conditions of interracial contact. It is likely that the interracial interactions reported by students in this study occurred under many different combinations and degrees of satisfaction of Allport's (1954) conditions for beneficial cross-cultural contact. The extent to which the results presented here inform the applicability of Contact Theory to college student interaction, therefore, is neither the objective nor warranted. Rather, the results can only provide insight into some of the ultimate outcomes related to interracial interaction and cannot speak to the necessary conditions that characterize interactions that are positively associated with such outcomes.

Discussion

The issue of diversity on campus is fraught with contradictory images, stories, and beliefs concerning the nature and the effect of a racially and ethnically diverse student body. There have been a handful of studies that investigate interracial interaction among college students and the developmental benefits of such interactions. These studies have found socialization across race to have positive effects on self-concept, academic development, commitments to racial understanding and environmentalism, and satisfaction with college (Astin, 1993a, 1993b; Chang, 1996). Interracial interaction in college was found to be more common for students of color and associated with various types of social and academic activities, including taking ethnic studies courses, participating in ethnic student organizations, and discussing racial issues (Chang, 1996; Hurtado, Dey, and Treviño, 1994; Hurtado, Carter, and Sharp, 1995). In investigating the correlates and outcomes of interracial interaction, however, previous studies have been unable to distinguish between casual interracial contact and contact on an "acquaintance" or friendship level.

What is clear from this study is that student interactions with diversity contribute significantly to two specific outcomes in college, leadership ability and knowledge and understanding of different races and cultures. These outcomes speak to claims on the role of a diverse student body in preparing students for multicultural citizenship, and it appears that the intuition of higher education leaders is correct. Interracial interaction contributes to development not only in an area where it is "expected, " i.e., cultural awareness, but also in the realm of one of the earliest objectives of higher education in this country, leadership (Brubacher and Rudy, 1976).

The findings reported here, however, also raise important questions concerning the conditions under which interracial contact in college has positive effects on development. First, unlike their counterparts, students with few close friends of their same race exhibited no net impact of interracial interaction on leadership ability. Initially, this result may seem counter-intuitive. One might expect students who have "acquaintance" type contacts across race to benefit the most from interracial interactions. For college students, however, interactions that do not take people out of their cultural comfort zones – i.e., the cultural space defined by students' close friends – may not present the emotional, interpersonal, and intellectual challenges required for change and development (Chickering, 1969). In other words, interracial interaction in college may be most beneficial for those students who engage in it the least.

The findings regarding feelings of racial exclusion also provide additional insight into the dynamics of interracial interaction and interracial friendships among college students. Feeling excluded due to one's race or ethnicity was not only more prevalent among students with fewer same-race friends, it also appears to have a negative impact on their growth in cultural knowledge and understanding. The question arises, then, as to how "safe" or comfortable these interracial interpersonal environments truly are for students. Combined with the finding that students of color are more likely than are white students to have fewer same-race friends and with other studies that found students of color to feel more racially excluded and alienated on predominantly white campuses (e.g., Allen, 1985; Hurtado, Dey, and Treviño, 1994; Loo and Rolison, 1986), a further question arises: Are diverse college friendship groups currently providing zones of cultural comfort to students of color?

Findings from a recent single-institution study have shown that students with more racially homogeneous friendship groups report greater degrees of trust and emotional closeness among their friends than do students who have racially and ethnically diverse friendship groups (Antonio, 1998). A multi-institutional study by Chang (1996) further suggests that as a campus becomes more diverse, interracial interaction may increase among white students without a similar increase among students of color. The implication of these results is that at some absolute level of racial representation, students of color may be able to engage in frequent cross-race behaviors while maintaining a group of close, primarily same-race friends in which they can paradoxically seek refuge from alienation and exclusion on campus. Obviously, the current and previous studies still leave unanswered questions regarding the nature of socialization within diverse and homogeneous college friendships, their role in limiting or encouraging more casual and challenging cross-cultural interactions, and any differences in the experiences of students of color and white students within more or less racially diverse interpersonal environments.

For all students, having fewer same-race close friends is associated with higher frequencies of interracial interaction in college. In other words, interracial friendships and interracial interaction tend to go together. Because of limits on structural diversity (white students are still the majority on most campuses), however, students of color are much more likely to experience diversity in their interactions than are white students. These structural limitations highlight the interrelated nature of two important dimensions of campus diversity, representation and intergroup relations (Smith, 1995). Because the benefits of socializing across race found in this study and others is tied directly to the overall diversity of the campus' student population, they may be less available to white

students on predominantly white institutions. Increasing the representation of students of color is therefore a necessary step toward maximizing the benefits of interracial interaction in college. Further investigation, however, is also required to determine institutional policies that move beyond the issue of representation and address effective strategies that provide all students with opportunities for interracial contact and the development of interracial friendships.

Findings from this study also contribute insight into practice. First, if the development of both leadership skills and cultural awareness co-exist as goals for higher education institutions, a number of additional forms of student involvement have been identified which contribute to those goals. For students with few same-race friends, participation in cultural awareness workshops and student government is associated with both outcomes, while for students with primarily same-race friends the outcomes are associated with participation in cultural awareness workshops, protests and demonstrations, group projects, as well as interracial interaction. In other words, these two goals can be mutually enhanced on campus through specific types of student interaction. And since these activities contribute to student knowledge and understanding of different races and cultures, they likely involve positive interracial contact as well.

The positive effects of interracial contact of the type measured in this study (studying, dining, etc.) suggest that much of that contact occurs in a context conducive to positive individual change. The additional activities identified as contributors to cultural knowledge and understanding also suggest many other situations of positive interracial contact, especially for students with less diversity among their close friends. These findings strongly imply that college and university campuses do provide students with

many settings and situations in which conditions of equal status, a lack of competition, and the support of authorities are generally satisfied.

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Table 1

Frequency of interracial interactions in college among students with many or few close friends of their same race or ethnicity

	# of close friends of the same race/ethnicity*	
Interactions engaged in "frequently"	"none" or "a few" (n = 1621)	"most" or "all" (n = 7175)
Dined with someone of a diff racial/ethnic group	49	17
Studied with someone of a diff racial/ethnic group	39	10
Had a roommate of a diff racial/ethnic group	35	9
Dated someone of a diff racial/ethnic group	25	5

*The differences between groups are statistically significant ($p<.001$) for each activity.

Table 2

Feelings of racial exclusion among students with many or few close friends of their same race or ethnicity

	# of friends of the same race/ethnicity*	
Items marked "frequently" or "occasionally"	"none" or "a few" (n = 1621)	"most" or "all" (n = 7175)
Felt excluded from school activities because of your racial/ethnic background	24	11
Felt pressure not to socialize with students from other racial/ethnic groups	16	10

*The differences between groups are statistically significant ($p<.001$) for each item.

Table 3

Self-rated improvements of Cultural Knowledge/Understanding in college among students with many or few close friends of their same race or ethnicity

	# of friends of the same race/ethnicity*	
Items marked "much stronger"	"none" or "a few" (n = 1621)	"most" or "all" (n = 7175)
Knowledge of people from different races/cultures	26	19
Ability to get along with people of different races/cultures	25	17

*The differences between groups are statistically significant ($p<.001$) for each item.

Table 4

Racial diversity of close friends among white students and students of color

# of close friends that are of a student's same race/ethnicity	percentages among white students (n = 7690)	percentages among students of color (n = 1129)
"All"	17	6
"Most"	69	38
"A few"	12	42
"None"	1	14

Table 5

Predicting the development of Leadership Ability in college: students of whom "none" or "a few" of their close friends are of their same race/ethnicity (n=1627)

	standardized regression coefficients		
variable blocks	model 1	model 2	model 3
Leadership Ability pretest	.53***	.53***	.51***
Pre-college variables			
Gender: female	-.15***	-.16***	-.16***
Age	.01	.00	.00
Student of color	-.00	.00	-.01
SES	.03	.04	.04*
High school grade point average	-.02	-.01	-.01
Academic ability (self-rating)	-.03	-.02	-.02
Understanding of others (self-rating)	.03	.03	.02
Hours per week socializing w/friends	.07***	.08***	.06**
Political orientation - liberal	-.02	-.01	.00
Commitment to racial understanding	.05*	.05*	.04
Social Activism	.03	.03	.02
Materialism & Status	.06**	.05*	.04*
Institutional variables			
Public university		-.02	-.03
Private university		-.05	-.05
Private four-year college		-.02	-.05
Selectivity		-.04	-.04*
Involvement variables in college			
Hours per week socializing w/friends			.03
Worked on group projects			.09***
Studied with other students			.06**
Participated in student government			.10***
Participated in protests/demonstrations			.02
Joined a fraternity or sorority			.02
Participated in an ethnic student organization			.01
Attended a cultural awareness workshop			.06*
Racial Exclusion			.00
Interracial Interaction			.02
Adjusted R^2	.374	.376	.411

***p<.001, **p<.01, *p<.07

Table 6

Predicting the development of Leadership Ability in college: students of whom "most" or "all" of their close friends are of their same race/ethnicity (n=7187)

	standardized regression coefficients		
variable blocks	model 1	model 2	model 3
Leadership Ability pretest	.57***	.56***	.54***
Pre-college variables			
Gender: female	-.05***	-.05***	-.06***
Age	.00	.00	.01
Student of color	.02*	.02*	.01
SES	.02*	.03*	.02
High school grade point average	-.04**	-.04**	-.04***
Academic ability (self-rating)	-.06***	-.06***	-.05***
Understanding of others (self-rating)	.06***	.06***	.05***
Hours per week socializing w/friends	.08***	.08***	.06***
Political orientation - liberal	-.02*	-.02*	-.03**
Commitment to racial understanding	.00	.00	-.00
Social Activism	.02	.02	-.01
Materialism & Status	.06***	.06***	.06***
Institutional variables			
Public university		-.03**	-.04**
Private university		-.04**	-.05***
Private four-year college		-.04*	-.05***
Selectivity		-.00	-.00
Involvement variables in college			
Hours per week socializing w/friends			.04***
Worked on group projects			.06***
Studied with other students			.06***
Participated in student government			.09***
Participated in protests/demonstrations			.03**
Joined a fraternity or sorority			.05***
Participated in an ethnic student organization			.01
Attended a cultural awareness workshop			.05***
Racial Exclusion			-.01
Interracial Interaction			.03*
R^2	.366	.368	.398

***p<.001, **p<.01, *p<.07

Table 7

Predicting gains in Cultural Knowledge/Understanding in college: students of whom "none" or "a few" of their close friends are of their same race/ethnicity (n=1632)

	standardized regression coefficients		
variable blocks	model 1	model 2	model 3
Pre-college variables			
Gender: female	.00	.01	-.02
Age	.06*	.06*	.07**
Student of color	.03	.03	-.07*
SES	-.08**	-.08**	-.07**
High school grade point average	.05	.04	.04
Academic ability (self-rating)	-.00	-.00	-.03
Understanding of others (self-rating)	.07**	.07*	.05*
Hours per week socializing w/friends	-.02	-.02	-.03
Political orientation - liberal	-.03	-.03	-.03
Commitment to racial understanding	.05	.05	.01
Social Activism	.07*	.07*	.04
Materialism & Status	.00	.00	.02
Institutional variables			
Public university		.01	.00
Private university		.04	.02
Private four-year college		.01	-.02
Selectivity		.02	-.03
Involvement variables in college			
Hours per week socializing w/friends			.02
Worked on group projects			.03
Studied with other students			.01
Participated in student government			.05*
Participated in protests/demonstrations			.05*
Joined a fraternity or sorority			-.02
Participated in an ethnic student organization			.12***
Attended a cultural awareness workshop			.06*
Racial Exclusion			-.05*
Interracial Interaction			.18***
R^2	.038	.039	.104

***p<.001, **p<.01, *p<.07

Table 8

Predicting gains in Cultural Knowledge/Understanding in college: students of whom "most" or "all" of their close friends are of their same race/ethnicity (n=7182)

variable blocks	model 1	model 2	model 3
Pre-college variables			
Gender: female	-.01	-.00	-.01
Age	.02	.02	.02*
Student of color	.05***	.05***	-.01
SES	-.08***	-.05***	-.07***
High school grade point average	.03	.02	.02
Academic ability (self-rating)	-.05**	-.05**	-.05**
Understanding of others (self-rating)	.04**	.04**	.03*
Hours per week socializing w/friends	-.01	-.01	-.02
Political orientation - liberal	-.03*	-.03*	-.04**
Commitment to racial understanding	.01	.01	-.02
Social Activism	.10***	.10***	.07***
Materialism & Status	.02	.01	.04**
Institutional variables			
Public university		-.03*	-.02
Private university		.01	.01
Private four-year college		-.02	-.01
Selectivity		.01	-.05***
Involvement variables in college			
Hours per week socializing w/friends			.02
Worked on group projects			.04**
Studied with other students			.02
Participated in student government			.01
Participated in protests/demonstrations			.03**
Joined a fraternity or sorority			-.02*
Participated in an ethnic student organization			.05***
Attended a cultural awareness workshop			.10***
Racial Exclusion			-.02
Interracial Interaction			.22***
R^2	.026	.028	.099

***p<.001, **p<.01, *p<.07

APPENDIX

Table A1

Variables in the regression models

Pre-college characteristics	
Leadership Ability pretest (Leadership analysis only)	3 item composite scale scored 3 to 15
Gender-female	1-male, 2-female
Student of color	1-no, 2-yes
Age	6 pt scale, "16 or less" to "21 or over"
SES	3 item composite scale of:
mother's education (self-report)	8 pt scale, "grammar school or less" to "graduate degree"
father's education (self-report)	8 pt scale, "grammar school or less" to "graduate degree"
family income (self-report)	14 pt scale, "less than $6000" to "over $200,000"
High School GPA (self-report)	8 pt scale, "less than C-" to "A or A+"
Academic ability self-rating	5 pt scale, "lowest 10%" to "highest 10%"
Understanding of others self-rating	5 pt scale, "lowest 10%" to "highest 10%"
Hours per week socializing with friends	8 pt scale, "none" to "over 20"
Political orientation-liberal	5 pt scale, "far right" to "far left"
Commitment to racial understanding	4 pt scale, "not important" to "essential"
Social Activism (composite, see Table A2)	10 item composite scale scored 10 to 40
Materialism and Status (composite, see Table A2)	6 item composite scale scored 6 to 24
Institutional characteristics	
Public university	1-no, 2-yes
Private university	1-no, 2-yes
Private 4-year college	1-no, 2-yes
Institutional selectivity	continuous scale, average composite SAT score of entering freshmen reported by the institution
College involvement measures	
Hours per week socializing w/friends	8 pt scale, "none" to "over 20"
Worked on group projects	3 pt scale, "not at all" to "frequently"
Studied with other students	3 pt scale, "not at all" to "frequently"
Participated in student government	1-"no," 2-"yes"
Participated in protests/demonstrations	1-"no," 2-"yes"
Joined a fraternity or sorority	1-"no," 2-"yes"
Participated in an ethnic student organization	1-"no," 2-"yes"
Attended a cultural awareness workshop	1-"no," 2-"yes"
Racial Exclusion (composite, see Table A2)	2 item composite scale scored 2 to 6
Interracial Interaction (composite, see Table A2)	4 item composite scale scored 4 to 12

Table A2
Composite Variables

Leadership Ability (alpha = 0.73)	factor loading
leadership ability self-rating[a]	0.74
social self-confidence self-rating[a]	0.71
public speaking ability self-rating[a]	0.71

[a]5 pt scale, "lowest 10%" to "highest 10%"

Cultural Knowledge/Understanding (alpha = 0.70)	factor loading
knowledge of people from different races/cultures[a]	0.64
ability to get along with people of a different race/culture[a]	0.61

[a]5 pt scale, "much weaker" to "much stronger"

Interracial Interaction (alpha = 0.74)	factor loading
dined with someone of a different racial/ethnic group[a]	0.84
studied with someone of a different racial/ethnic group[a]	0.81
had a roommate of a different racial/ethnic group[a]	0.68
dated someone of a different racial/ethnic group[a]	0.61

[a]3 pt scale, "not at all" to "frequently"

Racial Exclusion (alpha = 0.57)	factor loading
felt pressure not to socialize with others of a different race[a]	0.79
felt excluded from school activities because of my race[a]	0.74

[a]3 pt scale, "not at all" to "frequently"

Social Activism (alpha = 0.80)	factor loading
participate in a community action program[a]	0.75
become a community leader[a]	0.62
keep up to date with politics[a]	0.61
influence social values[a]	0.60
influence the political structure[a]	0.58
help others in difficulty[a]	0.55
develop a meaningful philosophy of life[a]	0.55
be involved in environmental cleanup[a]	0.54
participate in volunteer work[b]	0.51

[a]4 pt scale, "not important" to "essential"

[b]4 pt scale, "no chance" to "very good chance"

Materialism and Status (alpha = 0.71)	factor loading
obtaining recognition from my colleagues for contributions to my special field[a]	0.70
being very well off financially[a]	0.66
becoming an authority in my field[a]	0.64
having administrative responsibility for the work of others[a]	0.64
being successful in a business of my own[a]	0.58
the chief benefit of a college education is that it increases one's earning power[b]	0.42

[a]4 pt scale, "not important" to "essential"

[b]4 pt scale, "strongly disagree" to "strongly agree"